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The Comparison of Physical Activity Profiles of Primary School Students in Urban and Rural Areas During COVID-19 Pandemic

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Abstract

In the midst of COVID-19 pandemic, the role of Physical Education is unseen. The physical activity of the student decreases due to the COVID-19 pandemic. The aim of this research was to find out the differences of physical activity between the primary school students in urban area and rural area during the COVID-19 pandemic. This research used a survey method. The population of the study were primary school students in urban and rural areas. The subjects of the study were 110 students, 55 students as urban area subjects and 55 students as rural area subjects. The data gained by the researcher were primer data obtained from questionnaires distributed directly. During filling in the questionnaire, the students were assisted and helped by parents. The data were analyzed by the percentage technique. The result of this research concludes that there was a physical activity profile difference of primary school students in urban and rural areas during the COVID-19 pandemic. Therefore, the result of the study can be a depiction of physical activity condition during Covid-19 pandemic. The result of the study could inform parents and teachers to pay attention to the moderate physical activity for the students.

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INTRODUCTION

Physical Education (PE) is a comprehensive and cohesive form of education that focuses on the cognitive, affective, and psychomotor domains. It is noticeable that the role of physical education is vital in an educational process because it involves physical activities that can increase comprehensive changes in children (Casey & Goodyear, 2015). The purposes of physical education are to improve students' knowledge and skills in sports and improve the level of health and physical fitness of students through Physical Education learning (Mahendra, 2015, p. 21). However, during the COVID-19 pandemic, the role of PE in schools seemed to decrease because the learning has to be conducted online. Indeed, this is a challenge for all teachers, especially physical education teachers.

According to the World Health Organization (WHO, 2020), COVID-19 is a group of viruses that can transmit the disease to animals or humans. Several types of coronavirus are known to cause respiratory tract infections in humans ranging from colds, coughs to more severe problems such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) (WHO, 2020). A person can catch COVID-19 from a person with the virus, and this virus can spread by droplets from the nose or mouth, which come out when someone with the virus coughs, sneezes, or talks. A person could probably get infected if he or she inhales these droplets. This splash can stick to any objects or other surfaces, and when other people hold the objects or surfaces then touch their mouth or nose, the virus can be transmitted.

The presence of COVID-19 complicates human activities and has an impact on people's active lifestyles. Calitri (in Saputra, 2019, page 1) further explains that "an active lifestyle is a habit of an individual reflected in their physical activities (such as walking, swimming or walking upstairs) or sedentary behavior (like watching television, working on the laptop, or relaxing on the sofa)." The impact of COVID-19 is enormous. If someone is not having an active lifestyle, it can certainly affect attitudes and behaviors, leading to inactive or passive behavior. The fact shows that a lack of physical activity or body movement can decrease the level of fitness or physical fitness. This surely will have a negative impact on the health and development of the body.

The condition indicates that the impact of this disease outbreak significantly affects human health, and in this case, greatly affects children's physical activity. This condition is critical to be addressed because physical activity can increase the fitness of the human body to be spared from the current outbreak. There is substantial scientific evidence showing that physical activities produce a number of major health benefits for people of all ages. Warburton (In Kurniawan, 2019, p. 3). Less physical activity can undoubtedly decrease a child's physical fitness level. Physical fitness aims to maintain the children's health to carry out daily activities without feeling tired, which means that their physical fitness is in good condition.

Some study notes that the average physical fitness level of children in rural areas is 57.7%, while in urban areas the average level of physical fitness is 15.4%. The main differentiating factor in physical activity is the geographic location (Purnamasari, 2015, p. 237). The types of physical activity conducted by children in urban and rural areas are different. It can be identified from the results of the study that children in rural areas have a higher level of physical fitness. So it can be concluded that children in rural areas are more physically active than children in urban areas, and it is due to geographic location.

METHOD

This study used Widarto's ex post facto research method (2013, p. 13) since the "ex post facto" research was a study conducted after the phenomena had occurred, and in this study the researcher did not give any treatment to the sample.

Population

The subject population in this study was determined based on the background and objectives of the researcher. Therefore, researchers took the population of primary school students and students living in urban areas and in rural areas that were being affected by the COVID-19 pandemic. The quota sampling technique was administered in order to base the number of samples to be taken. A total of 110 samples were taken, divided into 55 samples of primary school students in urban areas and 55 primary school students in rural areas.

Data Collection Technique

The data collection was carried out by using primary data, and the researcher went straight away

to the respondents to gather direct statements. The data were collected from respondents through a questionnaire delivered in Google Form link. However, because some of the samples were unable to fill out the questionnaire in the link, the researchers provided a paper-version questionnaire to be distributed directly to respondents. In filling out the questionnaire, respondents were assisted by parents and were asked to answer honestly to ensure that the data obtained were objective. The data obtained were then processed using Microsoft Excel and the SPSS application program.

Data Analysis

In analyzing the data, the validity and realibility test were conducted first, followed by a reliability test to determine the level of consistency of a measuring instrument used. Instrument reliability testing was carried out using the SPSS 23.0 For windows with the Cronbach's alpha formula. The next data analysis technique was to calculate the average value obtained by the research subjects (primary school students in both urban and rural areas) with the interpretation as follows:

Table 1. Measuring Summary of Physical Activity through PAQ-C (Kowalski et al., 2004)

Interpretation	Favorable
Very light	1
Light	2
Moderate	3
Heavy	4
Very heavy	5

Table 1 describes the average score that had been obtained from the previous calculations and entered into the table so that later it would be known the value and the category of the scores obtained by students.

RESULTS AND DISCUSSION

The study results consisted of the calculation of the average score obtained by primary school students in urban and rural areas, which the researchers would then compare to see the level of physical activity conducted.

Based on the statistical data in table 2, the students in urban areas scored 27.47, while students in rural areas scored 24.53. To determine whether the activity carried out by the student was light or very heavy, the researcher combined the scores of 1-5 from each of the nine statements and took the average results of all the statements (Kowalski et al., 2004).

Table 2. Results of descriptive statistical analysis of urban and rural groups

Descriptive Statistics			
	N	Mean	Std. Dev
Urban group	55	27,47	5,953
Rural group	55	24,53	5,514
N Valid (listwise)	55		

Furthermore, the researcher processed the data from the nine statements that have been filled in by the research subjects. It was found that the level of physical activity of primary school students in urban areas was higher than the level of physical activity in children from rural areas. The level of physical activity of primary school students in urban areas during the pandemic was categorized as (moderate), while the level of physical activity of children in rural areas was categorized as (mild). These results can be seen in the figure as follows:

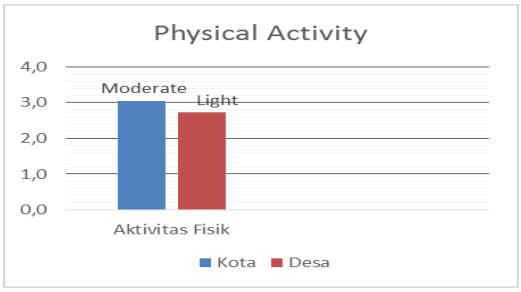

Figure 1. The level of physical activity of primary school students in urban and rural areas

From the results obtained, it can be seen that primary school students in the urban areas had a higher average amount of physical activity than primary school students who were in rural areas. Likewise, the researcher also tried to analyze data with gender classifications of primary school students in urban and rural areas, with the following results:

From the figure 2, it was noticeable that both male and female students in urban areas had a higher level of physical activity compared to primary school students in rural areas. The average number

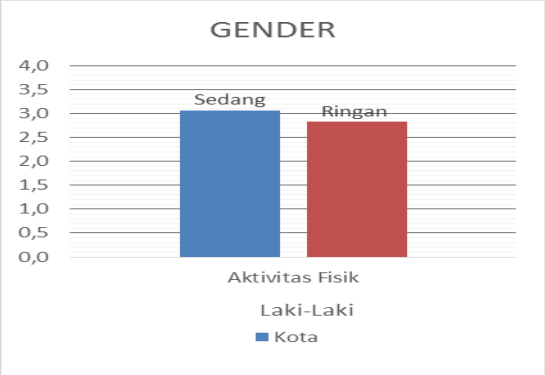

Figure 2. The classification results of male students

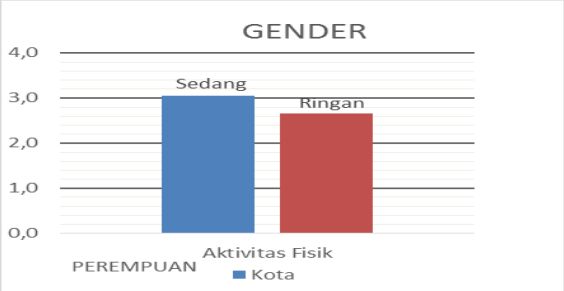

Figure 3. The classification results of female students

of physical activity compared to male students was 3.07 versus 2.83, while the females were 3.04 compared to 2.66. If it is interpreted, male and female primary school students in urban areas have a moderate level of physical activity, while the ones in rural areas are in a light level of physical activity.

Based on the description above, the researcher figured out that there are differences in primary students' physical activity profiles during the COVID-19 pandemic. Those who live in urban areas have a higher physical activity profile than the students in rural areas. However, students' lack of physical activity levels may be due to several factors (Smith et al., 2020). Two factors that influence physical activity in children are intrapersonal and interpersonal. Intrapersonal factors exist in the individual, such as gender, age, and attitude, while interpersonal factors are factors of support (social and household) from the physical environment and community policy. Therefore, the researcher classified these factors as follows:

Geographic location

The main differentiation factor in physical activity in rural and urban areas is the geographic location (Purnamasari, 2015 hlm. 241). The researcher identified that housings in urban areas were mostly residentials or complexes possessing a yard for physical activity in front of their houses. In the housing complex where they lived, there were also many field facilities for children to do physical activity and play. However, in the COVID-19 pandemic, their opportunities for conducting physical activity outside tended to decrease. However, it did not rule out the possibility that they were still carrying out activities around the complex. Whereas settlements in rural areas grew to be denser and children's play facilities such as fields had been replaced by houses or other buildings. In the past, there were still lots of empty land in rural areas to be used as facilities for children's play or physical activities, but today's reality showed otherwise. The vacant land had become settlements, and the houses' yard was not as big as the ones in the residents of urbanears. Thus, the geographic location could be a leading factor in the lack of physical activity during the COVID-19 pandemic.

Parents/Family

Parents or family can be a draining factor for children carrying out physical activities during the COVID-19 pandemic. Amidst the pandemic, all forms of daily activities are limited and make it difficult for children to play or conduct other physical activities. Suppose parents are aware of this pandemic situation, they will undoubtedly be aware of the need to keep their bodies healthy by doing physical activity to maintain their immunity. The assessment of the level of physical activity of children must be introduced to them at an early age so that they know and understand the benefits of physical activity. Those who understand the urgency will not remain stay still not to do anything because physical activity is considered very important (de Castro Pinto et al., 2020). Physical activity can be carried anywhere, but during the pandemic all activities are limited. Therefore, physical activity can only be conducted in the house yard, or even inside their house.

Technology and Institution/ School

In this era of industrial revolution 4.0, technology has increasingly become more sophisticated so that the delivery of information can be faster. Any information can be accessed from various kinds of media, especially smartphones. Indeed, a number of COVID1-19 related news has been spread on vari-

ous social media, and for those who use smartphones, the delivery of this information can be easy to obtain. During the COVID-19 pandemic, school learning was carried out online. For schools in urban areas, online learning was not difficult to conduct because the teachers and students have smartphones. Physical education teachers can use the device to send learning tasks to the students, so they can do the physical tasks at home. The similar privilege does not apply in rural areas. Not all parents could provide electronic devices such as smartphones to support their children, so the teachers' learning materials cannot be fully conveyed. This phenomenon was observed when the researcher obtained the data from subjects in rural areas online. Thus, it can be concluded that technology and institutions also become the factors that influence students' physical activity profile during the COVID-19 pandemic.

The accessibility to physical activity facilities is much better in urban areas, which significantly affects the physical activity of primary school students. Primary school students in urban areas have 6.51 m2 space for playing, while the primary students in rural areas only have 1.79 m2 for them to play (Sheu-jen et al., 2010). From these studies, it can be seen that the level of physical activity in urban areas is higher than in rural areas. In Japan, the average duration of walking to school for rural primary students aged 11-12 is shorter than those in urban areas. The duration of children playing in rural areas is shorter than in urban areas (Itoi et al., 2012). This is because children in rural areas go to school using the school bus. However, other research shows differently; that the physical activity of primary school students in rural areas is higher (57.7%) than the physical activity of those in urban areas (15.4%). The leading cause of the differences is the geographic location (Purnamasari, 2015 p.237).

Despite the differences of the research findings regarding the physical activity of primary school students in urban and rural areas, it is very natural to emerge due to the difference in the geographic location that affect the children's physical activity and other differentiating factors both from within the individual (internal) and from outside (external). Therefore, although there has been much research conducted on comparing the physical activity of primary school students in cities and villages, a revisited study with a broader population coverage is still needed. They have different physical activity profile criteria due to the diversity of student characteristics and wide geographic location.

CONCLUSION

Based on the data that the researcher has obtained, processed, and analyzed, it is concluded that there are differences in the physical activity profiles of primary school students in urban areas and the ones in rural areas during the COVID-19 pandemic. This study reveals that students' physical activity profile in the urban areas was higher than students in rural areas amidst COVID-19 pandemic.

The results of the research conducted provide benefits for Physical Education teachers and students' parents. Based on this research, children's physical activity levels in urban and rural areas are categorized as moderate and light. Thus, the results of this study can be used as a benchmark for assessment materials for teachers and parents to help increase the physical activity of students during and after the COVID-19 pandemic.

Based on the review of this study's results, the researcher intends to provide suggestions for the next researcher to conduct initial measures, namely to determine the variables, instruments, and research methods that must be adjusted to the situation and conditions that are happening. The purpose of the initial conduct is to facilitate the data collection process. To carry out a study wholly, a high level of knowledge and independence are also needed for dealing with any emerging problems, and it is expected to enrich a research reference source that can be useful for every reader.

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